AMENDMENTS

In The Claims:

Claim 1. (currently amended) A turbo-code fast encoding device~~, the device is suitable~~ for ~~the~~ a communication system~~, the device is suitable~~ and for outputting a parity information after ~~the~~ an encoding process on a turbo-code of ~~the~~ a sequential input, wherein, ~~the~~ an input bit sequence of the turbo-code is represented as $d=(d_1, d_2,\ldots, d_k,\ldots, d_N)$, where the d_k is ~~the~~ an input bit of the turbo-code fast encoding device at time k, k is from 1 to N, and N is ~~the~~ a segment length, wherein, the turbo-code fast encoding device comprisesing:

a first recursive systematic convolution (RSC) encoder; and

a second recursive systematic convolution (RSC) encoder, wherein, the first recursive systematic convolution (RSC) encoder and the second recursive systematic convolution (RSC) encoder comply to

$$y_{1,k} = d_k + \sum_{i=1}^{M} g_{1,di} a_{1,k-i}$$

$$y_{2,k} = d'_k + \sum_{i=1}^{M} g_{2,di} a_{2,k-i}$$

~~$$y_k = d_k + \sum_{i=1}^{M} g_{di} a_{k-i}$$~~

Wherein, d_k is the input bit and d'_k is a permutation bit of the input bit of the turbo-code fast encoding device at time k, ~~y_k is~~ $y_{1,k}$ and $y_{2,k}$ are the parity information corresponding to d_k and d'_k, ~~g_{di} is~~ $g_{1,di}$ and $g_{2,di}$ are ~~the~~ parameters that is generated by a first encoder feed-forward generator and a second encoder feed-forward generator, the ~~element~~ parameters ~~is~~ are either 0 or

1, whereas, ~~a_{k-i} is~~ $a_{1,k-i}$ and $a_{2,k-i}$ are generated by ith register of the first encoder RSC and the second RSC encoder at time k respectively.

Claims 2-4. (cancelled)